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Transformation of Children's Character through Digital Approaches in Primary Education

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Abstract
Integrating digital approaches into character education in primary schools has become increasingly significant, particularly in response to the COVID-19 pandemic. This transition involved adopting digital technologies and innovative pedagogical methods to enhance character education amidst the challenges of remote learning environments. Key components included using e-learning technologies and the development of electronic educational resources, which promoted independent student work and supported character development. Despite challenges such as limited digital literacy and device access, character education remained a vital goal, supported by strategies that leveraged online resources and involved parental engagement. Digital game-based learning proved effective in engaging students and fostering a student-centred learning environment, reinforcing its role in enhancing engagement and character development. Integrating digital technologies was crucial for addressing diverse student needs and improving teacher competencies, leading to better educational outcomes. The Ministry of Education and Culture of Indonesia developed a 15-year roadmap to improve educational quality and digital literacy, emphasizing the need for adaptation to a digital society. This study employed qualitative descriptive analysis through a literature review to explore the implementation of digital character education in primary schools. The findings suggested that effective digital character education required role modelling, a supportive environment, and consistent habituation, all essential for nurturing students' character in a digital age.

Keywords: *Digital Character Education, Primary Education, E-Learning Technologies*

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Introduction

The transformation of character education for children through digital methodologies in primary education has garnered considerable attention, particularly in light of the COVID-19 pandemic. This shift is marked by integrating digital technologies and innovative pedagogical strategies aimed at enhancing character education while addressing the unique challenges posed by remote learning environments.

A crucial aspect of this digital transformation is using e-learning technologies, which support independent student work. Developing comprehensive electronic educational and methodological kits—such as syllabi, lecture courses, and practical guidelines—is essential for

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effectively teaching "Modern Information and Digital Technologies in the Educational Process of Primary Schools" (Yaroshenko, Samborska, & Kiv, 2020). Such resources support the educational process and foster an engaging learning environment, enhancing character development through structured digital content.

The pandemic has underscored the critical need for character education as a fundamental primary education component. Despite challenges such as limited digital literacy and restricted access to digital devices, character education remains an imperative goal, particularly during crises (Akhwani & Romdloni, 2021). This perspective is supported by research indicating that effective character education can be delivered digitally, leveraging online resources and parental supervision to reinforce positive values (Trisiana, 2021). These strategies ensure that character education thrives, even within predominantly digital learning environments.

Digital game-based learning has emerged as a particularly effective approach for engaging students and fostering a student-centred learning environment. Empirical evidence suggests that digital games significantly enhance student engagement and facilitate independent exploration, thereby improving both academic performance and character development (Deng, Wu, Chen, & Peng, 2020). This finding is corroborated by additional research highlighting that digital game-based learning enriches the teaching process and promotes collaborative learning among students (Lampropoulos, 2023). The interactive nature of digital games provides a dynamic platform for instilling character values in a manner that resonates with young learners, making the educational experience both enjoyable and impactful.

Integrating digital technologies in education is also crucial for addressing the diverse needs of students. Mandatory use of technology in teaching can enhance teachers' competencies and positively influence their attitudes toward digital tools, which, in turn, benefits student learning outcomes (Yeung, Taylor, Hui, Lam-Chiang, & Low, 2011). This is particularly relevant in the context of character education, where effective use of technology helps educators instil essential values and skills in students, preparing them for the challenges of the 21st century (Susanto, Ritonga, & Desrani, 2022).

The current generation of primary school students is deeply immersed in digital technology, presenting both opportunities and challenges for their education. The Ministry of Education and Culture of Indonesia has acknowledged this reality and is actively developing a 15-year roadmap to improve educational quality and facilitate the digital transformation of national education. A key component of this initiative is the enhancement of digital literacy among students, which is increasingly important as society moves toward a digital-centric existence (Kurniasih, Utari, & Akhmadi, 2018).

The 21st century is marked by profound transformations, notably a digital revolution that permeates various dimensions of life, culture, civilization, and education. This era necessitates a reimagining of character education, integrating it with intellectual competencies to address emerging demands and challenges effectively (Nanda & Budimansyah, 2020). As today’s youth exhibit greater proficiency with digital devices than previous generations, frequently engaging with social media, games, and video platforms like YouTube (Rahmi, Henita, Gustiawan, & Erita, 2022), it is imperative to harmonize character development with technological adeptness. The Ministry's policy underscores the significance of habituation—instilling, practicing, and embedding values into daily life to foster a robust culture of character (Utaminingsih, 2023).

Nonetheless, the unregulated use of social media by children presents considerable concerns. Many young users lack the maturity to navigate these platforms judiciously, often encountering inappropriate content and engaging in risky behaviours such as forming connections with strangers online (Borolla1 & Marini, 2022). A UNESCO survey highlights that many Indonesian children add unknown individuals as friends on social media, posing serious safety risks (Cruzado et al., 2021). Rapid technological advancements have introduced

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new challenges requiring vigilant management and guidance from educators and parents (Kostenko, Frolova, Barsuk, Shostak, & Bondar, 2021).

In this context, schools are pivotal in addressing these challenges by imparting education on digital etiquette and ethics. Digital literacy should be a collective responsibility, involving all educators and school personnel, not solely confined to teachers of religious or civic education (Utaminingsih, 2023). Students need foundational skills to navigate the digital landscape safely and responsibly, including an understanding of the consequences of their online actions and the importance of maintaining a positive digital footprint (Suardi, Nursalam, Israpil, Kanji, & Nur, 2022).

Moreover, the implementation of digital character education must be both practical and seamlessly woven into students' daily lives. Research suggests that the digital era provides unique opportunities for character education, indicating that educational institutions must evolve to harness technology effectively for teaching character values (Jia & Huang, 2023). This evolution requires collaborative efforts among various educational stakeholders to ensure that students acquire the skills necessary to thrive in a digital society while adhering to ethical standards (Tabieh et al., 2021).

Methodology

This research employs a qualitative descriptive analysis method, specifically utilizing a literature review approach. The qualitative descriptive approach is chosen to describe and explain the findings from various sources effectively. Data, facts, and information are gathered from various documents and then analyzed and synthesized into coherent conclusions. Data collection is conducted through documentation studies, while content analysis is performed. The documents utilized include both print and digital sources obtained from the internet.

Content analysis is defined as a research method that involves an in-depth examination of the content of written or printed information in mass media (Vaismoradi, Turunen, & Bondas, 2013). In this study, content analysis is employed to investigate and discuss these sources, which include academic journals, books, conference papers, educational reports, and credible online resources. The selection criteria for these sources are: 1) Relevance: Sources must specifically address aspects of digital character education in primary schools, focusing on its implementation, effectiveness, and challenges. 2) Credibility: Sources should come from reputable publishers or institutions, ensuring the information is reliable and authoritative. 3) Recency: Preferably, sources should be recent (within the last 5-10 years) to reflect the current state of research and technological advancements. 4) Peer-Reviewed: Academic journals and papers should be peer-reviewed to ensure the quality and validity of the information.

The qualitative descriptive approach is particularly suitable for this research, as it aims to produce a low-inference description of the phenomenon under investigation (Moser & Korstjens, 2017). This method focuses on providing a clear and straightforward account of the data collected, minimizing the interpretative layers that might obscure the original context of the findings (Moser & Korstjens, 2017). As noted, both content analysis and thematic analysis are valuable in qualitative research, allowing for a nuanced understanding of the data while maintaining fidelity to the original sources (Vaismoradi et al., 2013).

Content analysis is utilized to examine the content of the gathered documents. This method involves: 1) Systematic Coding: Identifying and categorizing key themes, patterns, and concepts related to digital character education. 2) Thematic Analysis: Analyzing the frequency and significance of these themes across different sources to understand commonalities and variations in the literature. 3) synthesis: Combining findings from various documents to form a coherent narrative and conclude the implementation of digital character education.

Selection of Content: Documents are selected based on their relevance to the research question. Criteria include the focus on digital character education and the quality of the publication. Extraction of Data: Key information is extracted, including definitions, practices,

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challenges, and outcomes related to digital character education. Coding and Categorization: The content is coded into categories such as strategies, benefits, challenges, and case studies. This helps in organizing the data into manageable sections. Analysis: The coded data is analyzed to identify recurring themes, patterns, and insights. This includes comparing findings across different sources to understand the broader implications and consistency of the data. Synthesis and Conclusion: The analyzed data is synthesized to provide a comprehensive overview of the implementation of digital character education. Conclusions are drawn based on the patterns observed and the overall understanding of the subject.

Using this method, the research aims to provide a detailed and accurate description of how digital character education is implemented in primary schools, highlighting successful strategies and areas needing improvement.

Result and Discussion

The findings of this research indicate that the implementation of digital character education in primary schools is a continuous effort aimed at fostering both the physical and emotional development of students, guiding them from their innate traits toward a more civilized society. For instance, teachers encourage students to use gadgets wisely, avoid inappropriate and unproductive activities, manage their screen time, respect parents, care for younger peers, honor elders, and help friends. These practices exemplify the process of character education. Dewantara (1967) emphasizes the importance of three principles in character education: "ngerti-ngroso-nglakoni," which translates to awareness, understanding, and action (Pentianasari, Amalia, Martati, & Fithri, 2022). Thus, digital character education in primary schools is not merely taught but must also be practiced in daily life.

Impact of Technology on Character Education

Integrating digital technology into character education has several specific impacts: 1) Enhanced Engagement and Accessibility: Technology provides a dynamic platform for character education through interactive tools such as educational games and digital storytelling. For instance, digital game-based learning has increased student engagement and promoted independent exploration, supporting character development (Deng et al., 2020). In schools that have adopted these tools, students have reported greater enthusiasm for learning character values and a more profound understanding of ethical behaviour. 2) Resource Availability: Technology allows access to various educational materials, including online journals, e-books, and educational videos. This abundance of resources supports the integration of character education across various subjects, making it easier to link theoretical concepts with practical applications (Lampropoulos, 2023). 3) Teacher and Parent Involvement: Digital platforms facilitate better communication and collaboration between teachers and parents. For example, online platforms for sharing student progress and educational content can help parents stay informed and involved in their children's character education. However, this also requires parents to be digitally literate, which can be a barrier in some communities.

Challenges in Digital Character Education

Digital Literacy and Access: One significant challenge is the disparity in digital literacy and access to technology. Students from low-income families or remote areas may lack the necessary devices or internet access, limiting their ability to benefit from digital character education (Akhwani & Romdloni, 2021). Schools must address these gaps to ensure equitable access.

Content Appropriateness and Monitoring: Another challenge is ensuring that digital content is appropriate and monitored. With the vast array of online materials, there is a risk of exposing students to inappropriate content. Effective monitoring and curating of digital resources are essential to mitigate this risk.

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Balancing Screen Time: While technology can enhance learning, excessive screen time can negatively impact students' physical and emotional health. Educators must find a balance between digital and non-digital activities to promote holistic development (Trisiana, 2021).

Case Studies and Practical Examples

Pancasila Student Project: One successful initiative is the Pancasila Student Project, which integrates Pancasila values into the digital curriculum. Schools implementing this project report positive outcomes, including increased student awareness of national values and improved ethical behaviour (Wahono et al., 2021). Digital Citizenship Programs: Some Indonesian primary schools have adopted digital citizenship programs that teach students about online etiquette, safety, and responsible use of technology. These programs have successfully improved students' online behaviour and promoted respectful interactions (Suardi et al., 2022).

Responses from Stakeholders

Teachers: Teachers have responded positively to incorporating digital tools in character education, appreciating the enhanced engagement and resource availability. However, they also face challenges adapting to new technologies and integrating them effectively into their teaching practices (Yeung et al., 2011). Parents: Parents support digital character education but express concerns about screen time and content appropriateness. There is a need for training and support to help parents effectively monitor their children's digital activities (Kurniasih et al., 2018). Students: Students often enjoy digital character education tools' interactive and engaging nature. However, they also need guidance to navigate digital platforms responsibly and avoid potential distractions.

Comparison with Previous Research

Previous studies have highlighted similar benefits and challenges associated with digital character education. For example, research by Indra and Budimansyah (2020) emphasizes the importance of integrating national values into the digital curriculum, aligning with the findings of this study. However, this research also confirms that disparities in technology access and digital literacy remain significant barriers, as noted in earlier studies (Dharma, 2023). However, while digital technologies offer substantial opportunities for enhancing character education, their implementation must be carefully managed to address access, content appropriateness, and screen time challenges. By leveraging successful case studies and addressing the needs of all stakeholders, schools can effectively integrate digital character education to foster well-rounded, ethical students.

Conclusion

The transformation of children's character through digital methodologies in primary education offers both significant benefits and challenges. Digital tools, such as educational games and online resources, enhance engagement and promote essential values like empathy, respect, and responsibility, making character education more relevant to today's tech-savvy students. However, disparities in access to technology, the risk of inappropriate content, and the need to manage screen time pose challenges. Successful initiatives, like Indonesia's Pancasila Student Project, show that digital character education can be highly effective with proper support—such as teacher training, parental involvement, and content monitoring. Collaboration between educators, parents, and the community is essential to overcoming obstacles and maximizing the potential of these tools. By embracing digital methods, schools can help students develop strong moral foundations and prepare them to navigate the complexities of the digital age as responsible, well-rounded individuals.

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